

Trends in Demand Management

Ian Guerry – Vice President, New Market
Development

Engie Services U.S.

Who is ENGIE?

No. 1 supplier of energy services in the world

In 2017 **\$73 B Revenue**

\$16.2 B in net investment 2016-18

152,900 employees total 58,200 in power and natural gas & **94,700 in energy services**

900 researchers and experts in 11 R&D Centers



OPERATIONS IN 70 COUNTRIES

ENGIE North America



ENGIE Generation

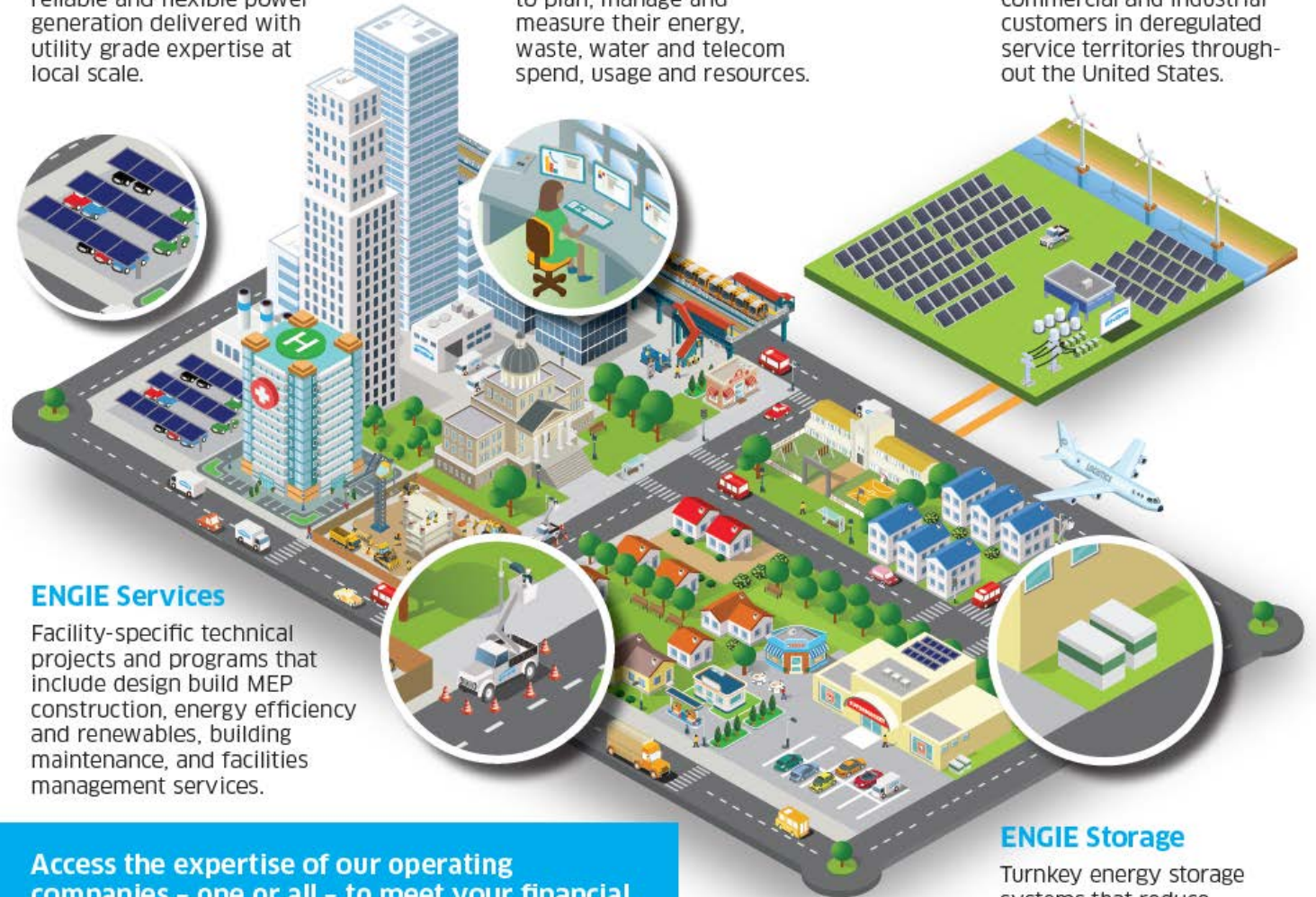
On-site energy networks and microgrids for clean, reliable and flexible power generation delivered with utility grade expertise at local scale.

ENGIE Insight

Data-driven insights to enable multi-site businesses to plan, manage and measure their energy, waste, water and telecom spend, usage and resources.

ENGIE Resources

Retail electricity and renewable supply for commercial and industrial customers in deregulated service territories throughout the United States.



ENGIE Services

Facility-specific technical projects and programs that include design build MEP construction, energy efficiency and renewables, building maintenance, and facilities management services.

Access the expertise of our operating companies - one or all - to meet your financial, facility and sustainability goals.

ENGIE Storage

Turnkey energy storage systems that reduce peak demand during high priced energy periods to lower costs.

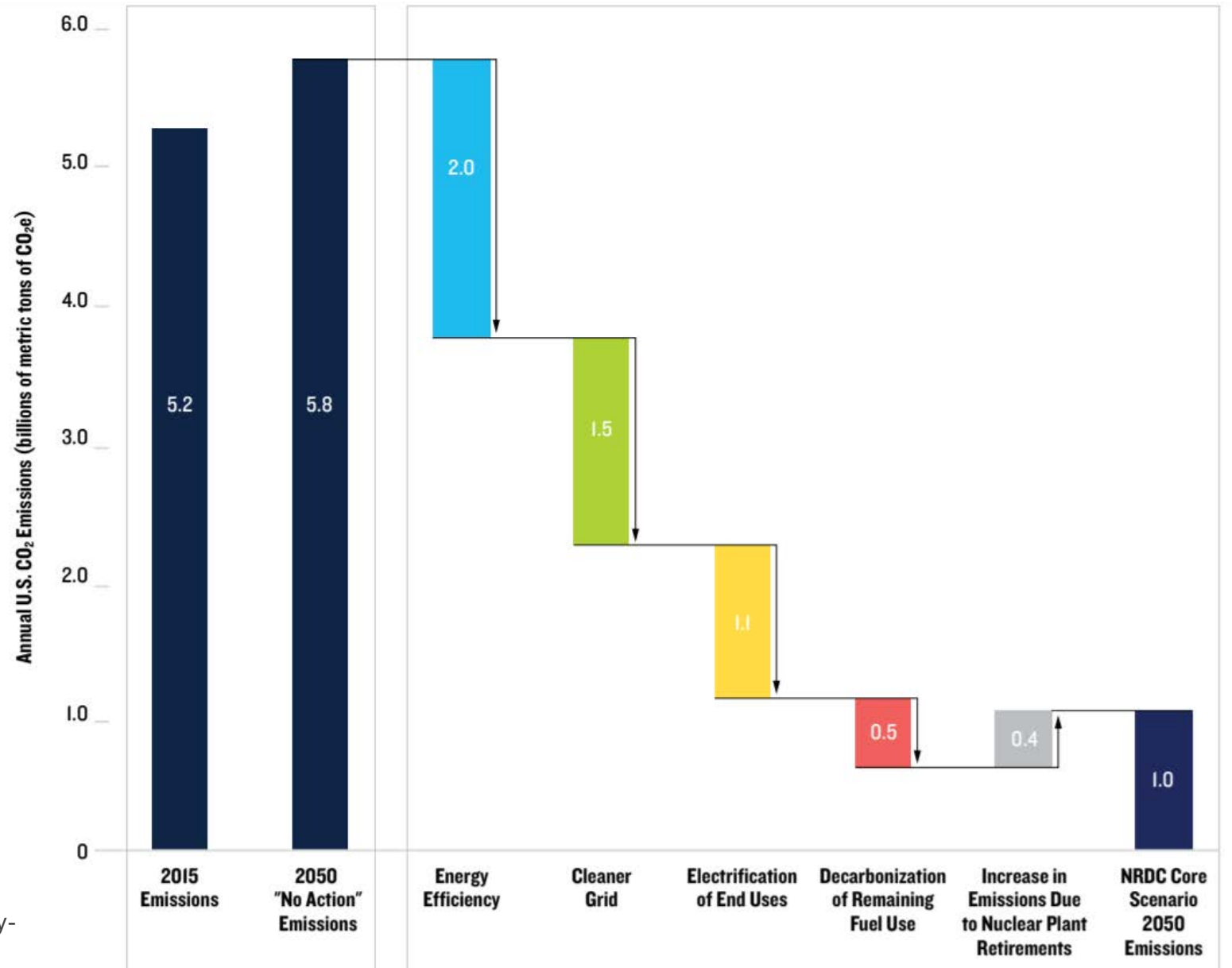
Hydrokinetic Energy



Marine Geothermal Energy



Competing Resources?



<https://www.nrdc.org/sites/default/files/americas-clean-energy-frontier-report.pdf>

Opportunities in a Changing Industry

Utility Challenges	Potential Solutions
Departing Load	<ul style="list-style-type: none">• Partner with energy service providers to deliver white-labeled solutions• Beneficial Electrification
Misalignment of EE Incentives	<ul style="list-style-type: none">• Measure and incentivize for performance and persistence of savings using IPMVP Options C & D• Focus on driving comprehensive projects
Need More Dynamic Grid	<ul style="list-style-type: none">• Encourage projects that deploy controllable loads and resources (building controls, storage, EVs, etc)
Decreased Revenues	<ul style="list-style-type: none">• Design new transaction models that help resolve the “lost units” issue – e.g. MEETS

Valuing Energy Efficiency As A Resource

- Transition to Pay-For-Performance (P4P), incentivize for delivered, persistent kWh savings
- Measure energy efficiency using whole-building M&V methodologies to reduce transaction costs
- Time and locational value of resource
- New financing models – move conversation from CapEx to OpEx
- New transaction models – treat non-generation resources (e.g. EE) the same as generation. To the grid it's the same thing! e.g. MEETS
- New Procurement Mechanisms: Non-Wire Solutions, All-Resource RFO

A quote to end on....

“As soon as this issue of clean energy and climate change comes up, the next words are ‘solar’ and ‘wind’ — which I totally support. I think they’re wonderful. But if we’re wasting lots of energy, we’re going to have to do way more clean energy in order to meet our needs.”

Stephen Cowell, president of E4theFuture